Textbook Alignment to the Utah Core – Algebra 2

This alignment has been completed using an "Independent Alignment Vendor" from the USOE approved list (www.schools.utah.gov/curr/imc/indvendor.html.) Yes _____ No _____

Name of Company and Individual Conducting Alignment: McHugh and Associates

A "Credential Sheet" has been completed on the above company/evaluator and is (Please check one of the following):

☐ **On record with the USOE.**

☐ **The "Credential Sheet" is attached to this alignment.**

Instructional Materials Evaluation Criteria (name and grade of the core document used to align): Algebra 2 Core Curriculum

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Title: Algebra 2: Concepts and Skills ©2008 **ISBN#: SE:** 978-0-618-55210-8 / **TE:** 978-0-618-55211-5

Publisher: McDougal Littell

Overall percentage of coverage in the *Student Edition (SE) and Teacher Edition (TE)* of the Utah State Core Curriculum: 86 %

Overall percentage of coverage in *ancillary materials* of the Utah Core Curriculum: N/A %

STANDARD I: Students will use the language and operations of algebra to evaluate, analyze and solve problems.				
Percentage of coverage in the *student and teacher edition* for Standard I: 90 %		**Percentage of coverage not in student or teacher edition, but covered *ancillary material* for Standard I: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 1.1: Evaluate, analyze and solve mathematical situations using algebraic properties and symbols.				
a.	Solve and graph first-degree absolute value equations of a single variable.	**SE:** 192-193, 195 (#25-38), 197 (#57, 59a), 196 (#39-41), 210 (Quiz 2 #4-9), 213 (#19-22), 215 (#19-21), 216 (#7, 15-17), 247 (#105-113), 348 (#6), 781 (#20-25) **TE:** 193 (Extra Example 1-2), 197 (Daily Homework Quiz #2-3), 213 (Extra Example 4.4)		
b.	Solve radical equations of a single variable, including those with extraneous roots.	**SE:** 365-370, 371 (Quiz 1 #16-21), 372, 402 (#24-30), 405 (#9-12), 406 (#5), 407 (#18), 506 (#68-73), 784 (#24-32), 792 (#45-48) **TE:** 366 (Extra Examples 1-4), 371 (Daily Homework Quiz #1-5), 372 (Extra Examples #1-2), 402 (Extra Example 7.3)		

c.	Solve absolute value and compound inequalities of a single variable.	**SE:** 174, 177 (#49-56, 60), 191 (Quiz 1 #3-6), 197 (#64-67), 198-203, 210 (Quiz 2 #13-25), 212 (#7-10), 214 (#23-28), 215 (#6-9, 25-27), 216 (#2), 217 (#8-9), 247 (#114-122), 349 (#31-35), 781 (#3-6, 26-31) **TE:** 174 (Extra Examples 4-5), 177 (Daily Homework Quiz #2), 198 (Warm-Up Exercises #3), 199 (Extra Examples 1-2), 200 (Extra Examples 3-4), 203 (Daily Homework Quiz #2-3), 212 (Extra Example 4.1b), 214 (Extra Example 4.5)		

d.	Add, subtract, multiply and divide rational expressions and solve rational equations.	**SE:** 480-485, 486-491, 492 (Quiz 2 #1-13), 493 (#4-6), 494-499, 500-505, 506 (Quiz 3 #1-15), 508 (#17-22), 509 (#23-34), 510 (#35-47), 511 (#11-23), 512 (#4-6), 513 (#8-11, 17-21a), 515 (#58-63), 786 (#10-44), 792 (#57-60, 65-68) **TE:** 481 (Extra Examples 1-3), 482 (Extra Examples 4-5), 485 (Daily Homework Quiz #1-5), 486 (Warm-Up Exercises #1-3), 487 (Extra Examples 1-3), 488 (Extra Examples 4-5), 492 (Daily Homework Quiz #1-4), 495 (Extra Examples #1-3), 496 (Extra Examples #4-5), 499 (Daily Homework Quiz #1-4), 501 (Extra Examples 1-3), 502 (Extra Examples 4-5), 506 (Daily Homework Quiz #1-4), 509 (Extra Example 9.5)		
e.	Simplify algebraic expressions involving negative and rational exponents.	**SE:** 361, 362 (#15-19), 363 (#50-74), 364 (#81-82), 371 (#4-15), 402 (#13-23), 405 (#5-8), 406 (#3-4), 784 (#20-23), 792 (#41-44) **TE:** 361 (Extra Examples 5-6), 364 (Daily Homework Quiz #4-5), 402 (Extra Example 7.2)		

Objective 1.2: Solve systems of equations and inequalities.				
a.	Solve systems of linear, absolute value and quadratic equations algebraically and graphically.	**SE:** 125-131, 132-137, 139-143, 144 (#55-57, Quiz 1 #1-10), 145-146, 153-158, 159 (#39, 45-50, Quiz 2 #8-10), 160-161, 162 (#19-21), 163 (#1-11, 15-19), 164-165, 167 (#55-64, 71-73), 732, 780 (#1-18, 26-28), 791 (#10-15) **TE:** 126 (Extra Examples 1-2), 127 (Extra Example 3), 130 (Daily Homework Quiz #1-3), 131 (Extra Example), 132 (Warm-Up Exercises #2), 133 (Extra Examples 1-2), 134 (Extra Example 3), 137 (Daily Homework Quiz #1-3), 139 (Warm-Up Exercises #1-3), 140 (Extra Examples 1-3), 141 (Extra Example 4), 144 (Daily Homework Quiz #1-4)		
b.	Graph the solutions of systems of linear, absolute value, and quadratic inequalities on the coordinate plane.	**SE:** 186-187, 188 (#6-8), 189 (#29-49), 190 (#51-52, 54-55, 57-58), 191 (Quiz 1 #17-19), 213 (#15-18), 215 (#16-18), 216 (#6), 781 (#14-19) **TE:** 186 (Extra Example 2), 187 (Extra Example 4), 191 (Daily Homework Quiz #2-3), 213 (Extra Example 4.3)		

c.	Solve application problems involving systems of equations and inequalities.	**SE:**127 (Example 3, Checkpoint #7), 129 (#35-39), 130 (#40), 134 (Example 3, Checkpoint #4), 136, 141, 143 (#33-37), 144 (Quiz 1 #10), 146 (#13-14), 158 (#31-33), 159 (Quiz 2 #11), 163 (#7, 11, 19), 164 (#4), 165 (#8, 13), 166 (#19), 167 (#64), 187 **TE:** 127 (Extra Example 3), 130 (Daily Homework Quiz #3), 134 (Extra Example 3), 137 (Daily Homework Quiz #3), 141 (Extra Example 4), 144 (Daily Homework Quiz #4), 145 (Warm-Up Exercises #3), 153 (Warm-Up Exercises #3), 187 (Extra Example 4)		

Objective 1.3: Represent and compute fluently with complex numbers.				
a.	Simplify numerical expressions, including those with rational exponents.	**SE:** 9 (Example 1, Checkpoint #1-4), 10 (Example 2, Checkpoint #5-7), 11 (Example 5, Checkpoint #10), 12 (5-8, 21-44), 14 (#74-75, 77), 15 (Quiz 1 #9-10), 22-23, 57 (#8-10), 58 (1.2 Examples #a, #11-16), 61 (#7-9), 62 (#3), 266 (#87-98, Quiz 2 #10-15), 778 (#7-14), 354 (Example 3, Checkpoint #7-10), 355 (Example 5, Checkpoint #17-19), 356 (#9-20, 36-51), 357 (#76-83) **TE:** 9 (Warm-Up Exercises #1), 10 (Extra Examples 1-2), 15 (Daily Homework Quiz #3-4), 16 (Warm-Up Exercises #3), 22 (Extra Examples 1-2), 23 (Extra Example 3), 58 (Extra Example 1.2 #a), 354 (Extra Example 3), 355 (Extra Ex. 5)		
b.	Simplify expressions involving complex numbers and express them in standard form $a + bi$.	**SE:** 262-263, 264 (#9-14, 27-50), 265 (#51-58, 74), 266 (#22-30), 273 (#91-96), 287 (#24-29), 289 (#22-27), 291 (#8-9), 782 (#35-38) **TE:** 262 (Extra Examples 2-3), 263 (Extra Examples 4-5), 266 (Daily Homework Quiz #2-6), 287 (Extra Example 5.7)		

Objective 1.4: Model and solve quadratic equations and inequalities.				
a.	Model real-world situations using quadratic equations.	**SE:** 227 (#69), 230 (Example 4), 233 (#68-73), 243 (Example 5), 245 (#83-84), 246 (#85-91), 247 (Quiz 1 #22), 251 (Example 5), 253 (#67-73), 257 (Example 4, Checkpoint #7), 259 (#69-73), 270 (Example 5, Checkpoint #8), 272 (#69-72), 273 (#73-75), 277 (Example 5), 279 (#63-69), 280 (#70-74) **TE:** 230 (Extra Example 4), 243 (Extra Example 5), 247 (Daily Homework Quiz #5), 251 (Extra Example 5), 257 (Extra Example 4), 260 (Daily Homework Quiz #7), 270 (Extra Example 5), 277 (Extra Example 5), 281 (Daily Homework Quiz #5)		
b.	Approximate the real solutions of quadratic equations graphically.	**SE:** 242 (Example 4), 248, 277 (Example 5)		

c.	Solve quadratic equations of a single variable over the set of complex numbers by factoring, completing the square and using the quadratic formula.	**SE:** 236, 237 (#12-14, 34-45), 238 (#46-54), 239 (#61-62), 242 (Example 4, Checkpoint #7-9), 243 (Example 5), 244 (#12-17), 245 (#46-68), 246 (#94-95), 247 (Quiz 1 #13-21), 254 (#94-99), 268 (Example 1), 269 (Example 3, Checkpoint #3-6), 271 (#39-47), 272 (#48-57), 273 (#79-90), 274-275, 277, 278 (#25-48) **TE:** 236 (Extra Examples 3-4), 239 (Daily Homework Quiz #4-5), 247 (Daily Homework Quiz #3-4), 269 (Extra Example 3), 273 (Daily Homework Quiz #3), 275 (Extra Examples 1-3), 277 (Extra Example 5)		
d.	Solve quadratic inequalities of a single variable.	**SE:** *Not addressed in this text*		
e.	Write a quadratic equation when given the solutions of the equation.	**SE:** 282-284 **TE:** 282 (Extra Example 1), 283 (Extra Examples 2-3)		

STANDARD II: Students will understand and represent functions and analyze function behavior.				
Percentage of coverage in the *student and teacher edition* for Standard II: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard II: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 2.1: Represent mathematical situations using relations.				
a.	Model real-world relationships with functions.	**SE:** 75 (Example 4), 76 (#12-13), 77 (#38-46), 206 (Example 4, Checkpoint #10), 207 (#19-20), 208 (#46-50), 226 (#67-68), 227 (#69), 230 (Example 4), 232 (#65-73), 304 (Example 2), 306 (#49), 307 (#50-53), 337 (Example 3), 339 (#35-37), 345 (#33) **TE:** 75 (Extra Example 4), 78 (Daily Homework Quiz #3), 206 (Extra Example 4), 210 (Daily Homework Quiz #3), 230 (Extra Example 4), 304 (Extra Example 3), 308 (Daily Homework Quiz #3), 337 (Extra Example 3), 340 (Daily Homework Quiz #2)		

b.	Describe a pattern using function notation.	**SE:** *Opportunities to address this standard can be found on the following pages:* 106-112 **TE:** *Opportunities to address this standard can be found on the following pages:* 108 (Extra Example 1), 109 (Extra Example 2), 113 (Daily Homework Quiz #1-3)		
c.	Determine when a relation is a function.	**SE:** 67-68, 70 (#3-5, 14-20), 71 (#21-23, 27-29), 78 (#62-64), 85 (Quiz 1 #1-2), 115 (#5-6), 119 (#1-3), 120 (#1-3), 779 (#1-3) **TE**: 68 (Extra Examples 1-2), 72 (Daily Homework Quiz 1)		
d.	Determine the domain and range of relations.	**SE:** 67, 70 (#2-4, 14-20), 78 (#62-64), 85 (Quiz 1 #1-2), 115 (#5-6), 119 (#1-3), 779 (#1-3) **TE:** 68 (Extra Example 1), 72 (Daily Homework Quiz #1)		

Objective 2.2: Evaluate and analyze functions.				
a.	Find the value of a function at a given point.	**SE:** 74 (Example 2, Checkpoint #5-7), 76 (#6-8, 13, 20-27), 77 (#39, 42, 46), 78 (#51), 85 (#7-10), 113 (#35-38), 116 (#7-10), 119 (#4-6), 120 (#4), 204 (Example 1), 205 (Checkpoint #1-3), 207 (#3-5, 10-18), 214 (#29-31), 215 (#28-30), 217 (#10), 375 (Example 4, Checkpoint #4-7), 377 (#32-39), 403 (#37), 779 (#4-9), 781 (#32-37) **TE:** 74 (Extra Example 2), 78 (Daily Homework Quiz #3c), 205 (Extra Example 1), 375 (Extra Example 4), 378 (Daily Homework Quiz #7-8)		
b.	Compose functions when possible.	**SE:** 375 (Example 3, Checkpoint #4-8), 376 (#9-13, 26-31), 377 (#32-39, 45-50), 378 (#53, 55, 58), 386 (Quiz 2 #3-4, 7-8), 403 (#37), 405 (#17-18), 406 (#7), 784 (#37-38) **TE:** 375 (Extra Examples 3-5), 378 (Daily Homework Quiz #7-8), 403 (Extra Example 7.4b), 380 (Warm-up Exercises #2)		

c.	Add, subtract, multiply and divide functions.	**SE:** 373 (Example 1), 374 (Example 2, Checkpoint #1-3), 376 (#3-8, 14-25), 377 (#40-44), 378 (#57), 386 (Quiz 2 #1-2, 5-6), 403 (#31-36), 405 (#13-16), 406 (#6), 784 (#33-36), 454 (#74-79) **TE:** 374 (Extra Examples 1-2), 378 (Daily Homework Quiz #1-5), 403 (Extra Example 7.4a)		
d.	Determine whether or not a function has an inverse and find the inverse when it exists.	**SE:** 380-385, 386 (#9-16), 400 (#44-49), 403 (#38-46), 405 (#19-22), 406 (#8), 784 (#39-46) **TE:** 381 (Extra Examples 1-2), 382 (Extra Examples 3-4), 386 (Daily Homework Quiz #1-3), 403 (Extra Example 7.5)		
e.	Identify the domain and range of a function resulting from the combination or composition of functions.	**SE:** 373 (Example 1), 374 (Example 2, Checkpoint #1-3), 375 (Example 3c), 376 (#1, 3-8, 14-31), 377 (#40-47), 386 (Quiz 2 #1-8), 403 (#31-36), 405 (#13-18), 784 (#33-38) **TE:** 374 (Extra Example 1-2), 375 (Extra Example 3c), 378 (Daily Homework Quiz #4, 6), 403 (Extra Example 7.4)		

Objective 2.3: Define and graph exponential functions and use them to model problems in mathematical and real-world contexts.				
a.	Define exponential functions as functions of the form $y = ab^x$, $b > 0$, $b \neq 1$.	**SE:** 412, 415 (#1, 3), 419, 422 (#1), 430 (#1)		
b.	Model problems of growth and decay using exponential functions.	**SE:** 414 (Example 4), 415 (#16), 416 (#40-41), 421 (Example 5, Checkpoint #11), 423 (#22-23, 39-41), 424 (#42-48), 425 (#52, Quiz 1 #13), 426 (Example 1, Checkpoint #1), 427 (Example 2, Checkpoint #2), 428-429, 430 (#13, 23-28), 431, 432 (#48-54), 439 (Quiz 2 #4-6), 459 (#27-28) **TE:** 414 (Extra Example 4), 419 (Warm-Up Exercises #4), 421 (Extra Example 5), 425 (Daily Homework Quiz #3), 426 (Warm-Up Exercises #5), 427 (Extra Examples 1-2), 428 (Extra Example 4), 429 (Extra Example 5), 432 (Daily Homework Quiz #4-5), 433 (Warm-Up Exercises #2)		

c.	Graph exponential functions.	**SE:** 411-414, 415 (#12-16, 25-39), 416 (#40-41, 44), 417 (#45-48, 50), 419-421, 422 (#8, 11-13), 423 (#24-38, 40), 424 (#42, 45, 47, 50-51), 425 (Quiz 1 #7-13), 432 (#63-68), 455 (#5-8), 456 (#9-12), 459 (#1-4, 10, 27b, 28), 460 (#2), 785 (#1-9, 10b), 515 (#43-45) **TE:** 413 (Extra Examples 1-2), 414 (Extra Examples 3-4), 417 (Daily Homework Quiz #1-2), 420 (Extra Examples 1-2), 421 (Extra Examples 3-5), 425 (Daily Homework Quiz #1-2), 455 (Extra Example 8.1), 456 (Extra Example 8.2)		

Objective 2.4: Define and graph logarithmic functions and use them to solve problems in mathematics and real-world contexts.				
a.	Relate logarithmic and exponential functions.	**SE:** 433 (Example 1, Checkpoint #1-4), 434 (Example 3, Checkpoint #5-10), 436 (#3-10, 19-26, 29-44), 437 (#61-68), 438 (#99, 101), 439 (#11-14), 460 (#6-7), 785 (#19-22) **TE:** 434 (Extra Examples 1, 3), 439 (Daily Homework Quiz #1, 3), 448 (Warm-Up Exercises #1-2)		
b.	Simplify logarithmic expressions.	**SE:** 434 (Example 3b, Checkpoint #8-10), 436 (#19-26, 28), 437 (#61-68), 438 (#101), 439 (#11-14), 443 (Example 3, Checkpoint #9-12), 444 (Example 4, Checkpoint #13), 445 (#15-20), 446 (#46-57), 447 (#72), 454 (Quiz 3 #4-7), 457 (#29-32), 459 (#21-23), 460 (#6-7), 461 (#9), 785 (#31-33) **TE:** 434 (Extra Example b), 443 (Extra Example 3), 444 (Extra Example 4), 457 (Extra Example 8.5b)		
c.	Convert logarithms between bases.	**SE:** 440		

d.	Solve exponential and logarithmic equations.	**SE:** 448-453, 454 (Quiz 3 #9-16), 458, 459 (#24-26), 461 (#12, 16-18), 515 (#52-54), 785 (#34-41) **TE:** 449 (Extra Examples 1-3), 450 (Extra Examples 4-5), 451 (Extra Example 6), 454 (Daily Homework Quiz #1-6)		
e.	Graph logarithmic functions.	**SE:** 435, 437 (#69-81), 438 (#98, 102), 440, 457 (#21-24), 459 (#14-16), 785 (#23-26) **TE:** 435 (Extra Example 4), 439 (Daily Homework Quiz #4), 457 (Extra Example 8.4b)		
f.	Solve problems involving growth and decay.	**SE:** 414 (Example 4), 415 (#16), 416 (#40-41), 421 (Example 5, Checkpoint #11), 423 (#22-23, 39-41), 424 (#42-48), 425 (#52, Quiz 1 #13), 426 (Example 1, Checkpoint #1), 427 (Example 2, Checkpoint #2), 428-429, 430 (#13, 23-28), 431, 432 (#48-54), 439 (Quiz 2 #4-6), 459 (#27-28) **TE:** 414 (Extra Example 4), 419 (Warm-Up Exercises #4), 421 (Extra Example 5), 425 (Daily Homework Quiz #3), 426 (Warm-Up Exercises #5), 427 (Extra Examples 1-2), 428 (Extra xample 4), 429 (Extra Example 5), 432 (Daily Homework Quiz #4-5), 433 (Warm-Up Exercises #2)		

STANDARD III: Students will use algebraic, spatial and logical reasoning to solve geometry and measurement problems.				
Percentage of coverage in the *student and teacher edition* for Standard III: 55 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard III: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 3.1: Examine the behavior of functions using coordinate geometry.				
a.	Identify the domain and range of the absolute value, quadratic, radical, sine and cosine functions.	**SE:** 389-390, 391 (Example 4, Checkpoint #4-6), 392 (#4-12, 15-23), 393 (#27-38), 394 (#51), 400 (Quiz 3 #1-3), 404 (#47-55), 405 (#24-25), 407 (#10), 784 (#47-50), 660 **TE:** 390 (Extra Examples 1-3), 391 (Extra Example 4), 394 (Daily Homework Quiz #1-2), 404 (Extra Example 7.6)		

b.	Graph the absolute value, quadratic, radical, sine and cosine functions.	**SE:** 205 (Examples 2-3), 206 (Checkpoint #4-9), 207 (#6-8, 27-29), 208 (#36-44), 221, 223 (Example 2, Checkpoint #4-6), 225 (#3-8), 226 (#30-44), 388-393, 400 (#1-3), 404 (#47-55), 405 (#24-25), 515 (#37-39), 660-665, 666 (Quiz 1 #8-10), 781 (#38-40), 782 (#1-4), 784 (#47-50), 789 (#14-17) **TE:** 205 (Extra Examples 2-3), 223 (Extra Examples 1-2), 390 (Extra Examples 1-3), 391 (Extra Example 4), 661 (Extra Examples 1-2), 666 (Daily Homework Quiz #1, 3)		
c.	Graph functions using transformations of parent functions.	**SE:** 209 (#54-56), 211, 221, 388, 394 (#50)		
d.	Write an equation of a parabola in the form $y = a(x - h)^2 + k$ when given a graph or an equation.	**SE:** *Opportunities to address this standard can be found on the following pages:* 228 (Example 1), 229 (Checkpoint #1-3), 231 (#2, 4-6, 22-27), 232 (#35-43), 233 (#74, 76), 247 (Quiz 1 #1-6), 286 (#7), 289 (#2), 782 (#9-11) **TE:** *Opportunities to address this standard can be found on the following pages:* 229 (Extra Example 1), 233 (Daily Homework Quiz #1, 2a)		

Objective 3.2: Determine radian and degree measures for angles.				
a.	Convert angle measurements between radians and degrees.	**SE:** *Not addressed in this text*		
b.	Find angle measures in degrees and radians using inverse trigonometric functions, including exact values for special triangles.	**SE:** *Not addressed in this text*		

Objective 3.3: Determine trigonometric measurements using appropriate techniques, tools and formulas.				
a.	Define the sine, cosine and tangent functions using the unit circle.	**SE:** *Opportunities to address this standard can be found on the following pages:* 651, 653-655, 656 (Guided Practice #15), 657 (#37-51), 658 (#72-73), 666 (Quiz 1 #4-7), 683 (#15-18), 685 (#9-12), 686 (#1), 789 (#10-13), 793 (#86-89) **TE:** *Opportunities to address this standard can be found on the following pages:* 651 (Key Discovery), 654 (Extra Examples 3-4), 658 (#Daily Homework Quiz 1-3), 660 (Warm-Up Exercises #1-2), 683 (Extra Example 12.2b)		

b.	Determine the exact values of the sine, cosine and tangent functions for the special angles of the unit circle using reference angles.	**SE:** *Opportunities to address this standard can be found on the following pages:* 653-655, 656 (Guided Practice #7-15, Practice and Applications #28-36), 657 (#37-60), 658 (#71-73), 666 (Quiz 1 #4-7), 683 (#15-18), 685 (#9-12), 686 (#1, 5), 789 (#10-13), 793 (#86-89) **TE:** *Opportunities to address this standard can be found on the following pages:* 653 (Extra Example 2, Key Questions to Ask for Example 2), 654 (Extra Examples 3-4), 655 (Extra Example 5), 658 (#Daily Homework Quiz 1-5), 660 (Warm-Up Exercises #1-5), 683 (Extra Example 12.2b)		
c.	Find the length of an arc using radian measure.	**SE:** *Not addressed in this text.*		
d.	Find the area of a sector in a circle using radian measure.	**SE:** *Not addressed in this text.*		

STANDARD IV: Students will understand concepts from probability and statistics and apply statistical methods to solve problems.				
Percentage of coverage in the *student and teacher edition* for Standard IV: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard IV: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 4.1: Apply basic concepts of probability.				
a.	Distinguish between permutations and combinations and identify situations in which each is appropriate.	**SE:** 546, 548 (#1, 8-10), 549 (#24-27), 551 (Quiz 2 #11-13), 552 (#13-15), 579 (#9-12), 580 (#6), 581 (#7), 787 (#6-9) **TE:** 546 (Extra Example 2)		
b.	Calculate probabilities using permutations and combinations to count events.	**SE:** 557 (Example 2, Checkpoint #5), 560 (#28-29, 31-33), 561 (#50), 564 (Example 5, Checkpoint #4-5), 567 (#42-43) **TE:** 557 (Extra Example 2)		
c.	Compute conditional and unconditional probabilities in various ways, including by definitions, the general multiplication rule and probability trees.	**SE:** 569-573, 574 (Quiz 3 #8-10), 578 (#30-32), 579 (#17-21), 581 (#9), 787 (#16-18), 793 (#74-76) **TE:** 570 (Extra Examples 1-2), 571 (Extra Examples 3-4), 578 (Extra Example 10.8)		

d.	Define simple discrete random variables.	**SE:** *Opportunities to address this standard can be found on the following pages:* 556 (Example 1), 557 (Checkpoint #1-4), 559 (Guided Practice #3-6, Practice and Applications #13-26), 561 (#48-49), 574 (Quiz 3 #1-4), 578 (#26-28), 579 #13-15), 580 (#2-3), 787 (#10-13) **TE:** *Opportunities to address this standard can be found on the following pages:* 557 (Extra Example 1), 561 (Daily Homework Quiz #1), 578 (Extra Example 10.6-10.7a)		

Objective 4.2: Use percentiles and measures of variability to analyze data.				
a.	Compute different measures of spread, including the range, standard deviation and interquartile range.	**SE:** 47 (Example 2), 49 (Guided Practice #6, Practice and Applications #18-24), 50 (#47-48), 51 (#54), 56 (Quiz 3 #6), 60 (#50), 63 (#21), 395-400, 404 (#56-62), 405 (#27-28), 407 (#11-12, 22-24), 533 (Example 1b), 534 (Example 2b, Checkpoint #2), 536 (Guided Practice #8, Practice and Applications #10-13), 537 (#18, 21, 23-24), 538 (#31, 32a-c), 551 (Quiz 2 #2) **TE:** 47 (Extra Example 2), 51 (Daily Homework Quiz #2), 52 (Warm-Up Exercises (#1), 396 (Extra Examples 1-2), 397 (Extra Examples 3-4), 404 (Extra Example #7.7), 533 (Warm-Up Exercises #4), 534 (Extra Examples 1b, 2b), 538 (Daily Homework Quiz #1-2)		

b.	Compare the effectiveness of different measures of spread, including the range, standard deviation and interquartile range in specific situations.	**SE:** *Opportunities to address this standard can be found on the following pages:* 47 (Example 2), 49 (Guided Practice #6, Practice and Applications #24), 50 (#47-48), 60 (#50), 63 (#21), 395-400, 407 (#22-24), 533 (Example 1b), 534 (Example 2b, Checkpoint #2), 537 (#18, 21), 538 (#32a-c), 551 (Quiz 2 #2), 787 (#5) **TE:** *Opportunities to address this standard can be found on the following pages:* 47 (Extra Example 2), 51 (Daily Homework Quiz #2), 52 (Warm-Up Exercises (#1), 396 (Extra Examples 1-2), 397 (Extra Example 4), 404 (Extra Example #7.7), 533 (Warm-Up Exercises #4), 534 (Extra Examples 1b, 2b), 538 (Daily Homework Quiz #1-2)		

c.	Use percentiles to summarize the distribution of a numerical variable.	**SE:** *Opportunities to address this standard can be found on the following pages:* 52-55, 60 (#49, 52), 61 (#23-24), 778 (#38) **TE:** *Opportunities to address this standard can be found on the following pages:* 53 (Extra Examples 1-2), 56 (Daily Homework Quiz #1-2)		
d.	Use histograms to obtain percentiles.	**SE:** *Opportunities to address this standard can be found on the following pages:* 52-55, 60 (#49, 52), 61 (#23-24), 778 (#38) **TE:** *Opportunities to address this standard can be found on the following pages:* 53 (Extra Examples 1-2), 56 (Daily Homework Quiz #1-2)		